

### **REMARKS**

Claims 1, 3-28, and 30-32 were pending in the application. Claims 1, 11, 15, 19, 22, 24, 25, 27, and 31 have been amended. Support for the amendments to claims 1, 22, and 27 may be found, e.g., in paragraph [0028] of the present application. New claims 33-39 have been added, and claims 10 and 14 have been canceled. Support for new claims 33-35 may be found, e.g., in Fig. 3. Support for new claims 36-37 may be found, e.g., in paragraph [0028]. Support for new claims 38-39 may be found, e.g., in paragraph [0002]. Therefore, claims 1, 3-9, 11-13, 15-28, and 30-39 are now pending in the present application. Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

### **Drawings**

The Examiner is thanked for approving the drawing corrections filed on May 14, 2003.

### **Finality of the Office Action**

Applicant respectfully traverses the finality of the Office Action, because a new reference was applied against claim 7 that was not necessitated by Applicant's Amendment and Reply on May 13, 2003. According to MPEP §706.07(a), second actions shall be final except where the Examiner introduces a new ground of rejection that is neither necessitated by Applicant's amendment of the claims nor based on information submitted in an IDS.

The only amendment to claim 7 in Applicant's Amendment and Reply on May 13, 2003 was changing "wherein the image measurement unit is configured to measure the characteristic" to "wherein the image measurement unit is configured to measure the brightness" (emphasis added). Yet, the Office Action on page 7 asserts that Fantone discloses a brightness sensor. Thus, changing "characteristic" to "brightness" cannot necessitate the introduction of a new reference (Shioda) if the old reference (Fantone) discloses both (i.e., both the amended and unamended limitations). Further, Shioda was introduced as a reference against the latter part of claim 7 ("by directly measuring light emitted from the specimen and

not refracted by the main optical system”), which was not changed in Applicant’s Amendment and Reply.

Further, Applicant respectfully asserts that claim 7 was improperly rejected under Fantone in the first Office Action. Even though the application, at that time, did not include Fig. 4 directed to claim 7, the plain language of claim 7 (“wherein the image measurement unit is configured to measure the characteristic of the specimen image by directly measuring light emitted from the specimen and not refracted by the main optical system,” (emphasis added)) is incompatible with Fantone, which only discloses image processing an image that has been reflected out of the main optical system 14.

The Applicant has offered the technical reasons for traversing the finality of the Office Action. However, on a simpler level of fairness, the Applicant has not been given a fair chance at arguing for the allowability of claim 7 over Shioda. Shioda is a new, substantive reference that could have been applied in the first Office Action. Applicant has paid for the full examination of each and every claim in the present application, including claim 7, and respectfully asserts that each claim deserves a fair hearing. Therefore, the Applicant respectfully requests withdrawal of the finality of the Office Action, entrance of the present amendments, and examination on the merits.

### **Prior Art Rejections**

Claims 1-6, 8-19, and 21-26 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,786,154 to Fantone et al. (hereinafter “Fantone”). Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fantone in view of U.S. Patent No. 6,081,371 to Shioda et al. (hereinafter “Shioda”). Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fantone in view of U.S. Patent No. 6,217,519 to Grund et al. (hereinafter “Grund”). Claims 27, 28, and 30-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fantone in view of U.S. Patent No. 5,307,202 to Martino et al. (hereinafter “Martino”). Applicant respectfully traverses these rejections for at least the following reasons.

Amended claim 1 recites a controller configured to adjust an overall brightness of the image signal generated by the superimposition apparatus in response to a measurement by the image measurement unit of the overall brightness of the specimen image. Applicant respectfully submits that adjusting the overall brightness of a pixilated image signal requires adjusting the brightness of each and every pixel in the image signal. Otherwise, the controller would be configured to adjust only a partial brightness of the image signal.

Fantone does not teach, suggest, or disclose this feature. In fact, Fantone is directed to superimposing an enhanced image into the original specimen image, where image enhancement techniques may include “increasing the gain of a portion of specified frequency... selectively increasing the gain applied to portions of the transformed signal... [and] Edge enhancement...”. (Col. 3, lines 16-42, emphasis added.) An advantage to this feature is described in col. 4, lines 40-62: “Specifically, suppose that the enhanced image shows that an area of tissue is diseased, while the outline of the diseased area is not visible on the unenhanced visible image. In enhancing the image, visible ‘landmarks’ used by the surgeon to orient himself with respect to the tissues of the patient are frequently obscured... By comparison, the real time, superimposed combination of the enhanced and visible images provided by the present invention automatically provides a correlation between the enhanced image... and the visible image...”. In other words, Fantone is directed to increasing the brightness (or other characteristic) of some pixels in the enhanced image relative to other pixels, so that the enhanced image provides contrast information not available in the original, unenhanced image. If the brightness of all of the pixels in the enhanced image (i.e., the overall brightness) were increased commensurately, the enhanced image would provide no new information over the original, unenhanced image. Thus, Fantone does not and cannot teach, suggest, or disclose a controller configured to adjust an overall brightness of the image signal, because such a controller would defeat the purpose and operation of Fantone’s microscope. MPEP §2143.01.

Further, the controller (liquid crystal driver 9) of Shioda may not be imported into the microscope of Fantone, because, as suggested above, such a modification of Fantone would render Fantone unsatisfactory for its intended purpose. MPEP §2143.01. None of the other cited references cures the deficiencies of Fantone. Therefore, claim 1, and all claims

dependent therefrom, are believed to be patentable over the cited prior art. Withdrawal of the rejections is respectfully requested.

If the Examiner agrees with Applicant's arguments, but disagrees that the present addition of "overall" to claim 1 is sufficient to overcome Fantone, the Examiner is respectfully requested to suggest a word other than "overall" to overcome Fantone.

Independent claims 22 and 27, and all claims dependent therefrom, are believed to be patentable over the cited prior art for reasons similar to claim 1. Withdrawal of the rejections is respectfully requested.

New claim 33 recites that the controller is configured so as to maintain a substantially constant ratio of the brightness of the image signal to the brightness of the specimen image, and so that said image signal is substantially brighter than said specimen image. None of the cited references teaches, suggests, or discloses this feature. New claim 33, and all claims dependent therefrom, are believed to be allowable over the cited prior art. New claims 34 and 35, and all claims dependent therefrom, are believed to be allowable over the cited prior art for reasons similar to claim 33.

### **Conclusion**

Applicant believes that the present application is in condition for allowance, and favorable reconsideration is requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

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Respectfully submitted,

Date

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